A Study of Technology Platform Adoption by Unorganized Grocery Retailers in India

SHORT SYNOPSIS

Submitted in partial fulfillment of the requirement of the degree of

DOCTOR OF PHILOSOPHY

to

Manav Rachna University

by

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MANAV RACHNA
vidyanatariksha
MANAV RACHNA UNIVERSITY
(FORMERLY MANAV RACHNA COLLEGE OF ENGINEERING
NAAC ACCREDITED 'A' GRADE INSTITUTION)
Declared as State Private University under section 2f of the UGC act, 1956

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DECLARATION BY THE SCHOLAR

I hereby declare that the short synopsis "A study of technology platform adoption by unorganized grocery retailers in India" being submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy in department of Management & Commerce under Faculty of Management of Manav Rachna University, Faridabad during the academic year 2021-22

It is a bona-fide record of original work carried out under the supervision of Dr. Rashi Banerji has not been submitted in full or part to any other university or institute for degree or diploma. Further, it is certified that short synopsis is within the plagiarism limit and copy of the same is attached as per University norms.

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ABSTRACT

Word Limit: 200-250

Unorganised retailing in India has been the backbone of the retailing economy in the country. Even with the evolution of organized trade in the past two decades, it is 90% of the retail business. The organized retail in India is growing at the rate of 20% to 25%, however it is projected that unorganized retail will be 77% of total retail in the country in next 3 years. Unorganized retailers have been facing challenges of large assortments, better infrastructure, more systems, tools and processes at organized retailers which help them get efficiencies in scale and margins and also become a destination for consumer seeking better value for money. On the other hand, unorganized retailers thrive on relationship, trust and personalization of service. Unorganized retailers in India are now being offered various technology tools and platforms which can help make their businesses more efficient and deliver more margins and profits. Since, the unorganized retailers are fragmented and diversified with individual owners, the adoption of these platforms will be dependent on the acceptance of these by the retail owner / family members who run or influence the business. The research is setup to understand the factors which will lead to the acceptance of these technology platforms by unorganized retailers in India. The study intents to research 600 such retailers to understand their acceptance of the technology platforms and adoption in their business.

Key words: Unorganized Retail, Traditional Trade, Technology Adoption, Kirana Stores, Trade Marketing

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INTRODUCTION

Since time immemorial, a retail set up has found manifestation in the basic framework of human material transaction. One may draw its origin to the first known barters between granular units of the society. With the advent of the concept of money as a medium of measuring and a standard, the efficacy of retail pervaded all things material and non-material.

From being the transaction for two mutually beneficial relationships, retailing went on to spread its tentacles in all spheres of business, and in the mesh connecting them who produced and them who consumed , there was a rise of several nodes in the value chain.

In the world witnessing random, chaotic and disruptive transformations, the complexion of the Retail sector hasn't been untouched. It continues to evolve itself in various ways, riding the waves of social metamorphosis through ages. Similar evolution has happened in Indian retail from Haats, Mandis and Melas to shops and malls in which hypermarkets and super markets have emerged.(Anjan,K 2018)

For an effective discourse of specific traits, let is concentrate on the following 2 formats of Retail as we know it:

01. Business to Business Retailing

02. Consumer Retailing

In the following few paras', these two types of retailing formats are explained.

Business to Business Retailing

As the name suggests, this retailing business typically operates to service business entities. The end buyers from these kind of retail stores are business communities who generally buy commodities from these stores for re-sale or for large scale consumptions or business use. These are customers and may not essentially be the end consumers.

One typical format of this type of retail stores is called Cash and Carry Stores. To buy from these stores you need a business registration and you generally buy from these stores to stock your own business / shops with material which is resold.

These stores typically handle bulk supply requirements and do not cater to small quantities of billings. For Example, if you want to buy 1 toothpaste, this store will not be billed to sell it to

you, as the minimum quantity for billing in this store would be a pack of 12 tubes of toothpaste, and likewise.

This format of retail is existing in India and operates under the brand names of Metro Cash and Carry, Best Price, Reliance Mart. These types of stores are very large and are generally located in suburban locations of a city, to ensure that they can facilitate large warehousing space and large movement areas for pallets and forklifts within the stores.

Consumer Retailing

Consumer Retailing as the name suggests is the retail format, where generally the end consumer of the product goes to buy the commodity or the product from. This is by far the most popular form of retailing and has been an integral part of all our lives. This is also the part of retailing that that undergone huge transformation in the past few decades. There are various kind of consumer retailing formats and the classifications are bases on various aspects of business.

The consumer retail business can be classified on basis of the mode of which the business is conducted – Online / Offline Retail / Home Shopping Retail etc. It can be classified basis the categories in which retailers operate – Grocery, Pharmacy, Consumer Durable, Apparels, Lifestyle, etc. It can also be classified based on ownership and method of conducting the business – Organized retail, Unorganized Retail, etc. Unorganized retailing is also termed as Traditional Trade / Retailing in some reports and references.

For the scope of this study and its relevance, we will focus more on the classification basis ownership and the method of conducting business of retail and discuss the Organized and Unorganized retail in a little more detail.

The big similarity in both these formats of retail business is that the fundamental of retail, i.e.,

a. purchase of goods from a manufacture
b. ability to store the goods and show it to the consumers
c. enable selling of these goods and products
d. exchange of money

All the above mentioned four steps happen in both the formats of retail. The difference however is the way they happen and the scale at which they happen.

Organized Retail

The Organized Trade is generally run by large retail organizations who have established best practices and processes and have ability to influx large amount of moneys to make high quantity of purchases, have developed their internal warehousing across the country or in specific regions and have managed a complete supply chain engine within their organizational structure. These Organized retailers open multiple stores across the country or a region and can either have stores for a specific category of goods and products or can have stores which are selling multiple categories of products to the consumers. A list of some of these organized retailers is mentioned in table 1.

Table 1. Illustration list of Organized retailers and categories

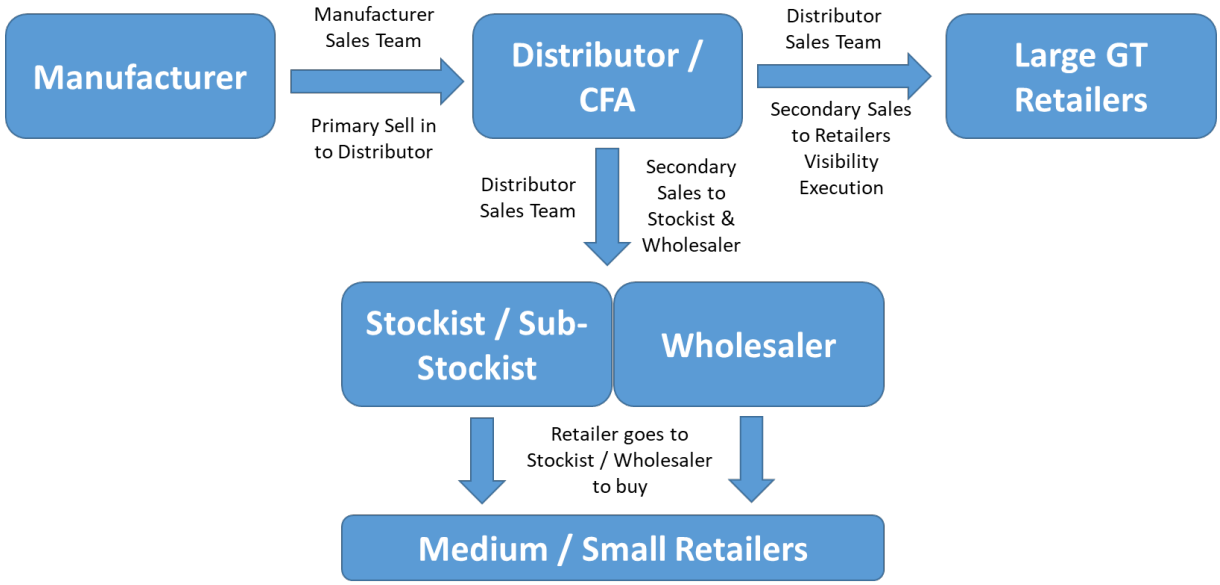
Organization	**Retail Store Brand**	**Categories**	**Format**
Tata Retail	Croma	IT & Consumer Durables	Large
Reliance	R-Digital	IT & Consumer Durables	Large & Neighborhood
Future Retail	Big Bazar	Multiple Categories	Large
Future Retail	Food Hall	Food and Household Goods	Large
Reliance	R-Smart	Multiple Categories	Large
Reliance	R-Fresh	Multiple Categories	Neighborhood
Titan	Tanisq	Jewelry	Specialty
Titan	Titan	Eyewear & Watches	Specialty
Aditya Birla Grp	More	Multiple Categories	Large & Neighborhood
Fab India	Fab India	Apparels, Home & Furniture	Large
IKEA	IKEA	Furniture	Large
Vijay Sales	Vijay	IT & Consumer Durables	Large
Shopper Stop	Shopper Stop	Apparels & Lifestyle	Large
Tommy Hilfiger	Tommy Hilfiger	Apparel & Lifestyle	Mini Markets

Unorganized Retail

Unorganized retailing is the most common form of retailing that is know to us in India. The neighborhood store next door, run by a family with limited resources, who have been supplying us with regular commodities and products almost on a day to day basis form the part of the unorganized retail format.

These are generally family run businesses and have very limited resources, including manpower, money, inventory, space and facilities from the business eco-system and also engagement from the manufacturers. A typical supply ecosystem for unorganized retail business is given in illustration 1.0

Illustration 1.0 (Typical supply eco-system for unorganized retailer)



A relative comparison of Organized Retail Vs Unorganized Retail in India

India is predominantly an Unorganized retail market. Various industry reports conducted from various time to time have indicated the evolution of organized retailing in India, with a comparison to unorganized retailing in India. The IBEF report for 2018 shows that the unorganized retailers account for 93% of the total market and it is forecasted that by 2020, this number will be at 90% which is still a very significant number. The report also goes ahead to suggest that the unorganized retail sector has huge potential for adopting digital payments and around 63% of retailers are interested in using them.

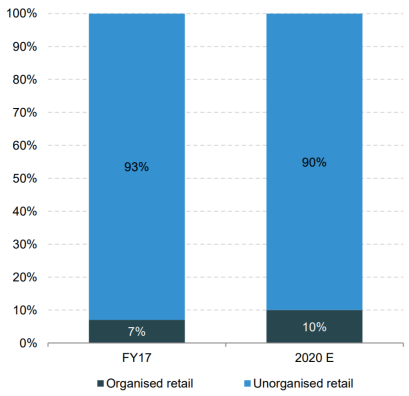


Chart 1.0 Source: IBEF Report, Retail-September 2018

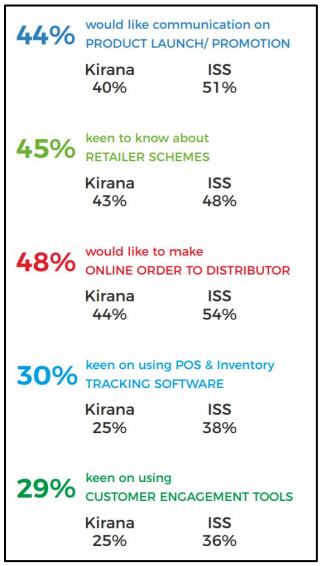
Major Challenges faced by Unorganized Retailers

a. Unable to complete with Organised Neighbourhood stores like Reliance Fresh, Spencer's, Easy Day Club, etc
b. Does not have an engagement model to pass promotions and discounts to regular customers, knows the customer, but unable to use data tools due to lack of skill and resources
c. Are unable to effectively control the inventory in the stores, get to know that a Product / SKU is out of stock when the customer comes to ask for it and the shop helper informs that it is not there
d. Reordering of supplies is also a manual process – if the owner misses to enter an out of stock SKU in the notebook, the same will not be ordered and thy will have to wait for another week to get supplies as per the supply cycle of the FMCG distributor
e. Shop boys are handling cash when going for delivery of goods to homes, handling of cash and challenges around the same are risk to business
f. Carrying of cash home at the end of the day / Non deposits in banks / Non digital transactions, put the retailer to risk on theft and even life because of money.
g. Unable to track benefits passed by Manufactures and schemes given by them to the retailer
h. New consumers cannot find the stores due to no digital presence of the store on google, Justdial platforms etc
i. No use of Data and Science in supply chain, procurement & consumer management

The Indian shopper still is shopping at the Mom and Pop stores or the local Kirana stores for groceries, etc. or their known neighborhood store for other commodities. Unorganised trade contributes to about 88% of total grocery sales in our country. *(Accenture, Transforming Kirana Stores to Drive Economic Growth, 2020)*

In the past few years, there are platforms which are being offered to the small retailers for booking orders from distributors and wholesalers, communication of offers and discounts on various products, enabling the retailers to maintain billing and inventory, communicating and engaging with consumers and also with managing loyalty programs with manufactures and consumers. A variety of technology platforms range from billing systems and payment systems also called retail ERP systems in the late 2010 decade, however now more evolving platforms for Ordering supply chain and communication with manufactures are being made available to the unorganised retailers by both manufacturers and B2B supply chain companies in form of Mobile applications, etc. *(ET Mint, Tech Adoption to boost FMCG firms, 3rd May 2021)*. Companies like Udaan, Solv, Ring Ring offer such technology platforms to retailers for managing the challenges faced by them.

In a recent study conducted by CPM India, a global field marketing company it was found that with the onset of Covid Pandemic retailers in the FMCG segment are looking forward to adopt technology in their business and the major focus for them will be ability to pace orders and to be able to communicate with the manufacturers on various offers on the products.



Regional Impact (% positive responses)

	North	East	West	South
Online order though App to distributor:	37%	41%	61%	52%
New product launch communication:	36%	31%	56%	52%
POS & Inventory tracking software:	32%	20%	38%	30%
Retailer schemes communication:	37%	42%	52%	47%
Consumer Engagement tools:	27%	20%	37%	32%

Source : Winning During Disruption Whitepaper, by CPM India, August 2020

Relevance to the Study

Indian retail in just about the last decade and a half has seen some transformational changes. That is the evolution of the Organized Trade in India, however during the recession and economic slowdown during the period 2009-2010, the organized retailers started focusing on maximizing revenue per sq. ft in their store space. This led to the organized retailers focusing on leveraging better customer experience inside the stores, leveraging technology to create efficiency in their operations models, using data to negotiate margins with manufactures and suppliers. Also, during the same period India started experiencing virtual / online retail as a mode of shopping and the consumer experience of receiving goods at better prices and greater discounts, delivery at home and offices, easy replacements and reverse logistics, etc. This created a new loyalty and shopping behavior towards the online mode of shopping.

In 2016, when demonetization hit India, the biggest barrier to growth of online shopping and shopping at organized retailers – use of plastic money and virtual money, was addressed and a forced transition happened in the consumer habit of paying by cards / wallets, etc. instead of cash payments. All through these years, the organized trade including large format retail and e-commerce has been able to contribute about 25% to the total revenue / sales generated by companies in various categories by 2021.

The Indian shopper still is shopping at the Mom and Pop stores or the local Kirana stores for groceries, etc. or their known neighborhood store for other commodities. To keep pace with the changing business environment and to complete with the organized retailers, the unorganized retailers in India will need to undergo significant changes in the way they conduct their business. Some of the retailers have started to adopt those changes and started to create a retention and loyalty of their customers and engagement with distributors of manufacturers and suppliers, whereas the majority of the retailers are still grappling to cope up with the situation

LITERATURE REVIEW

A detailed and systematic review of the past research studies conducted, and the papers published in the past on the subjects related to the topic gives an adequate insight, direction and the aspects to be considered while creating the research plan and scoping for the research. An exhaustive literature review has been conducted on the topic and it leads to the following aspects:

01. Factors of Competition from Organized Retail
02. Digitalization and Innovation in Retail Technology

Bhatnagar, S (2015) in the study emphasizes on the concussion of organized retail over unorganized retail and reveals on the impact it will have on the large unorganized retail business if it is not progressive enough. The study recommends that steps should be taken safeguard the interest of the unorganized sector, as this sector holds greater number of employment opportunities to the society. This also gives an edge to the entrepreneurs to bring-in new development in the country as the most of the retail's respondents have less than INR 1 lakh investment and belong to the low income families. The unorganized retailers should plan their future by making strategies on retaining customers by delivering good quality products and services. They should seek collaborations on regional level to survive the competitive world.

Balkrishan, S, Kolte, A and Pawar, A (2019) in the study highlights how traditional grocery stores are trying to keep up with the competition and improving their sales by providing various kinds of services like credit facilities, free home delivery, exhibiting products in an enhanced manner and capitalizing on their long-term relationships with the customers. It is quite evident that unorganized retailers making attempts to contend with organized retailers by improving their quality and by interacting with the customers in their store. The least impacted stores as in an unorganized retail is pharmaceutical stores. In India, organized and unorganized retailing will live and withstand together. Both of these formats have their own set of customer base and segment groups. The impact of shopping mall on unorganized retail stores like Kirana store or mom-n-pop store is huge and are considered as a threat to their existence.

Gupta, H, Dubey, N and Patani, P (2012) advocates that loyalty, ease of shopping and trust are factors present in the neighborhood stores leads customers to shop from that store in India. The study also indicates upon change in consumer behavior which combines shopping with other enjoyment activities that leads them to shopping mall and other organized retail stores. The study also put forward that organized retail needs to put in a lot of hard work to gain consumer confidence and to become a part of successful value system in India. The research clearly shows the tremendous opportunities that exists for traditional retailers to grasp using their strength and move forward.

Sinha, P & Gokhale, S & Rawal, S (2015) studied the aspect of last mile delivery in the Kirana perspective, which could possibly alter paradigms. They could liaison with e-stores given their lack of resources and acumen Delivery is an online specific challenge, and consolidation of different orders to be delivered may be challenge due to several constraints. Kiranas can potentially emerge as pick-up points pertaining to online orders. Kirana stores need to be equipped with technology to integrate their order receiving capabilities through tablets/mobile phones. The duo of a pervading internet and ubiquitous Kirana stores may look to enhance accessibility thereby resulting in a larger catchment area.

Agarwal S, Basu, D, Ghosh, P, Bhuvanesh, P and Zhang, J (2018) indicated that during the inception of demonetization digital transaction in retail increased to 1.8 times and post demonetization the e-payments number rose to 38 times. Customers with high bill were seen using debit card more frequently and customers with less bill saw a noteworthy shift to card usage. Hence, it was observed that there was a significant shift towards digitization and adoption to technology by retailers post demonetization.

Gupta, T (2017) in her research helped us comprehend that e-commerce platform impacted on a larger scale on Kirana stores and other traditional stores. In this new age of internet, these Kirana store needs to pull up their socks in order to survive the digital era. The research talks about the age, location and the products the business deals in, it also emphasizes on the age of the owners involved in running the store or businesses, and how they are the key factors to strategize for sustaining and taking the business ahead.

Sitaraman, K (2018) gives a perspective of manufacturers towards Kirana and says that marketers need to understand the shopper marketing does not only mean offering discounts, display windows and making sure of availability of stock all the time. It means Kirana store owners and marketers to understands and realize the importance of serving its consumers efficiently and impressively. Lastly, this initiative needs to be taken as worldwide agenda and help the store understand the principles of shopper marketing engraved in an understanding of consumers that it is an ideal way to have a strong and growing Kirana store.

Phutela, P (2020) propose that India's unorganized sector is huge as compared to organized sector, and because of which consumers visit more often to neighborhood stores. Hence, it is very important for the Kirana stores and supermarkets to make its customers shopping experience remarkable. Due to digitalization and upcoming technology there has been an inclination towards organized retails, and it is expected to grow in future as well.

Mitra, D (2018) in the study reveals that pricing points, proximity to home, home delivery, credit facilities and friendly behavior of the shopkeepers are few of the factors which a consumers keeps into consideration while buying from a nearby grocery or a Kirana store. Such kind of strategies needs to be taken into consideration to increase the customer footfall form organized retailers' point of view.

Talreja, M & Dr. Jain, D (2013) research clearly portrays that closeness was clear winning point for unorganized retail stores. Unorganized retailers have better edge over organized store because of the credit facilities, home delivery, and aptitude to sell loose products. However, organized retailers have more advantage on their visual appearance of the store, availability of the product and discounts. In order meet consumers' needs and expectations unorganized retailers should purchase assortments from single whole seller and avails sufficient discounts. To keep up with the pace unorganized retailers should various kinds of facilities to its customers like discounts on bulk buying, better display, various offers and schemes, and self-service facilities.

Gupta, U (2012) recommends that consumers are inclined towards visiting organized store because of ease of availability, cleanliness, and better entertainment facilities for kids and restaurants. On the other hands, credit facilities, closeness to neighborhood and bargaining facilities determines more customers in unorganized stores. It is observed that mom-n-pop stores are more preferred by families earning less than 4.0 Lakh annually or someone who is single earning member. Consumers with higher education and qualification were more inclined towards organized retail store. The research also talks about on how the unorganized retailers needs add to their product line and give importance to quality of the product to attract customer. Both organized and unorganized retailers should add value added services for ensuring enhanced shopping experience and comfort for its customers.

Yadav, Rajesh K. and Verma, M (2015) study talks about the youth and high-income customers' inclinations and shift towards organized retails stores as compared to Kirana stores for grocery shopping. Consumers believes that they attain more satisfaction while purchasing from organized retail outlets because the get products on various discounts & offers which provides them more value for money. The study also reveals that customers seeks gala time by visiting malls and supermarkets as these setups provide enormous kinds of entertainment facilities to its customers like music, food – courts, cinemas etc. The study also talks about the unorganized retails stores are preferred by those customers living in the closer proximity, credit facilities, friendly attitude of the retailer, and availability of loose products.

Goswami, P & Mishra, Mridula S (2009) outline the aspects impacting customers who move from Kirana stores to Modem retail. Organized retailers are preferred for cleanliness, more frequent offers, and exclusive house brands. Loyalty of a customer is dependent on the importance they attach to these attributes within stores. Kiranas thus face serious threats from organized sector pertaining to offering better solutions and enhancing their shopping experience

Chopra, N & Kashyap, C (2018) studied factors impacting shopping choice. Traditional retailers should take conspicuous steps in providing facilities to customers, on the lines of better discounts, kids play zones, parking etc. They need focused efforts in making the billing more hassle free. They need to consider hiring skilled salesforce to attract customers and offer weekly/ monthly programs to retain customers and increase base. They must learn to employ leaflets/pamphlets.

B. Anjan Kumar & Prof. A. V. Satya Narayana Rao (2018) discovered a maturing market, with most retailers focusing on profitable growth. Major retailers look to tap into the growing retail market by introducing innovation in technologies, store formats and payment options to attain market leadership. The impetus came from internet penetration and technology innovations. The study also found out that that retailers across the globe are transforming from 'brick & mortar' to 'click & mortar'

Kathuria, Lalit M & Jain, S (2013) showed smaller retailers could begin loyalty programs to enhance sales, wherein customers received loyalty points and upon getting to a limit, can get gifts or redeem coupons. Future research studies may want to focus on studying success of these formats like specialty stores, and monitoring the importance of supply chain, novel technology, larger cluster development in the story of Kiranas in India, thereby also analyzing impact of larger retailers in categories like grocery, apparel, fruits and vegetables, etc.

Ramanan, J and Ramanakumar, KPV (2014) the research indicates that conventional retailers that are small in nature needs to work upon loyalty programs to boost their sales, through which consumers can gain some loyalty/ bonus points and can redeem those point at certain point in a form of gift or discount coupon. Forthcoming research project objective maybe to analyze and study the format of the stores, their supply chain patterns, technology and others to compete with its competitors and large retailers.

Ray, Nabati C., Waley, G and Paul (2020) suggest traditional retailers should reassess strategies involving product specialization, novel formats service (e.g. home delivery) and pooling resources. Absence of modern financial, managerial acumen, this may not be the panacea. Add to that the fact that many of their advantage are not high on the priority list of Kirana owners themselves and are majorly seen as offerings from supermarkets. There is a dire need intervention, or the challenges will get insurmountable.

S. Jayakrishnan (2013) found out that organized retail is still at 5%-7% in India. Kirana store would need support in being able to offer enhanced product supply and better access to consumers of

commodities and services

Rani, E (2013) established the need to support Kirana stores in enhancing access to better products at more competitive prices to ensure passing the benefits to end consumers, especially in rural and non-metropolitan areas. The average consumer in India depends on their neighborhood Kirana stores for daily requirements. The government needs to consider intervening through policies to uplift these Kirana stores, and make them competitive against major retailers.

Jehangir, B (2019) indicates that Kiranas encounter several challenges from the organized sector. By adopting new technology, these stores can pay more attention to customer management through modifications in invoicing, billing, inventory management and stock control. A POS system is a basic requirement going forward, to streamline their process and manage stocks. It gives better control over business and guides them in taking informed decisions. However, many Kirana store proprietors are skeptical in this aspect, perhaps due to lower levels of education.

Singh, Vibhu P. and Chandra, R (2016) indicated that Digital technology assisted big retailers/ e-markets leading to a competition with Traditional formats. This has made it difficult for the traditional retailers to survive in the market. Customers increasingly expect retailers to provide online shopping and payment. It may not be needed to be physically to purchase items. Traditional retailers are trying to compete and many are working on their digital strategies. This evolution is now a global trend. This will gradually evolve traditional Indian retailers tin more technology driven units of retail

Keerthan, R & Aithal P. S. (2018) highlighted the importance of digitization for India. This could change the economy. There will be several changes and novel ideas will emerge. It was important to get statistics of the unorganized economy. Digitization will also enhance employment opportunities.

Joshi S, Parashar M and Kaur, H (2019) indicated the vital need to change from traditional retail to a more 'smart retail'. The retail industry accounts for 10% of India’s GDP. As digital transformations take place, and smart cities look to emerge, it creates a necessity to transform from traditional to smart retailing. India lags in this area. Traditional retailers need to be educated about the vitality of smart

technologies and the impact on retail sector, and the benefits of these technologies. Smart technologies help bring about smart solutions, leading to better services, experience and delivery.

Grewal, D, Roggeveen, Anne L. & Nordfält, J (2016) highlighted how many technologies are used by retailers for customer engagement. Smart technologies have also made it possible for retailers to collect information and use it profitably. This emerges as a gateway for them in the Future of Retailing.

Inman, J. Jeffrey & Nikolova, H (2017) reinstated the criticality of innovation through new technology. The rampant evolution of new technologies assists he retailers in studying and understanding shopper behavior. Continuous innovation in technology also helps them in changing shoppers' perceptions. It offers higher satisfaction, value and trust, thus increasing revenue and eventually ROI for the new technology

Koshy, L (2017) this is a discourse indicating effect of demonetization on the unorganized sector. It depicts that India is at the zenith of using cash, and citizens use cash daily. Most of this isn't reported to authorities, some of which is the result of corruption. Demonetization hit the unorganized sector as majority of consumers used cash and were unaccustomed to financial applications, in contrast to the organized sector.

Srivastava, R (2017) this indicates digital marketing is a new trend in retailing. As digi-selling/marketing increases, it will compete with the organized sector. Retailers should understand these channels to plan spending less on real estate and reach broader customer base, and compete with this trend

Hagberg, J, Sundstrom, M & Egels-Zandén, N (2015) found a greater deal of transformation through Digitalization. The study depicted digitalization transforming consumer interface. It changed the way of exchanging (et al) finance, communication, distribution. Digitalization made it convenient for retailers and consumers to interact and offer better service and experience.

Panigrahi, A, Shah, U and Jain, P (2019) discovered that there were 12 million Kiranas in India. Several startups in B2B supply space focused on Kiranas /mom-and-pop formats. The likes of Jumbo, Udaan etc. are creating mechanisms for access to wholesale procurement pertaining to these small stores. Grocery category in India is large, and draws interests from Reliance Jio, Amazon and other giants. They also compete with tech startups to in this space, to supply inventory to Kirana stores. Traditional retailers' option to upgrade to the modern retailers' format, by integrating platforms available to them

The research will be based on the technology acceptance model, Davis(1989, 2003). The model has been used in various researches for acceptance of technology and innovations across merchants and consumers technology products.

The model will be used in conjunction with the innovation diffusion theory (IDT) model, Rogers (1962, 1995) and elements of the same will be tested in the research on Trialability, Compatibility & Relative Advantage.

The element of facilitating conditions, Age, Education & Experiences from the UTAUT model, Venkatesh (2003) will also be added to the selected model to study the impact of COVID-19 and the demographics of the retailers on the adoption of the technology

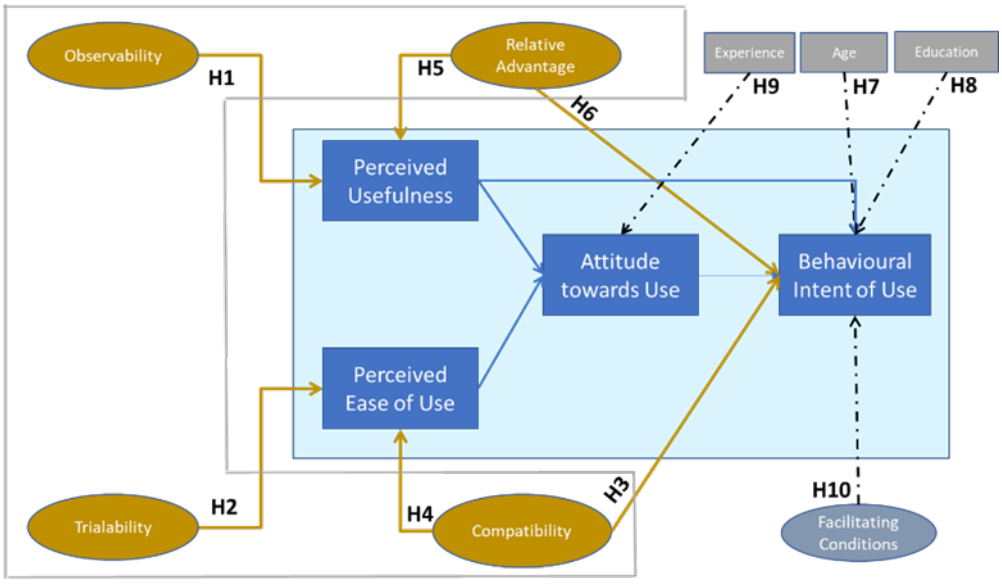


Image : Concept Model for the Study

The proposed model will help us in studying the retailer's behavioural change of Intent of use of technology. This is based on two major factors which impact the attitude towards use :

- **Perceived Ease of Use** : How easy it is for the retailer to adopt the same, which is directly linked to the retailers current systems in the store and the demographics of age and education which allow him / her to try the technology.
- **Perceived Usefulness** : How useful the retailer feels the technology is to his/ her business which is clearly determined by seeing the gaps in the business process and improvement that the technology can bring to the retailer and also the relative competitive advantage that it will bring to him/ her compared to other competition stores. It has also been found in previous researches that perceived relative advantage positively impacts the intent to use of the system or technology. (Shih, 2007)

- **Intent of Use** : This is a measure of how effectively the Perceived Usefulness of the technology and the Perceived Ease of Use has been to the end user. The higher the two factors the easier it will be to induce a behavioural change of Intent of Use.

- **Facilitating Conditions** : These get further accelerated when certain circumstantial disruptions like Covid-19 arise and the business needs to innovate and adopt to newer ways of working.

- **Demographics & Experience** : These are moderating factors which influence the adoption of the platform are also included in the model to study their effect on the same.

The proposed model captures all these parameters and can be used to develop our research further.

RESEARCH GAP

Research Gap

On reviewing of the Literature, it is found that the subject needs a more detailed study and understanding from the perspective of the unorganized retailer.

Further research can be done into gathering information with respect to their **business preparedness to evolve and adapt the changing technology landscape** of retail which impacts the **organized retail competition and the supply eco-system and consumer behavior.**

In various research and studies two variables – **Consumer behavior and Organized competition** or, **organized competition and supply chain eco-system** have been studied, however with the **evolving retail environment there is a need to further research the adoption of newer technology platforms by the unorganized retailers and how it is helping them to keep their business relevant in the disruption caused by technology.**

With the onset of Covid-19, technology platforms are being made available by various startups and large players like Reliance Jio and Metro C&C, there is a **need to understand the acceptance of these platforms amongst the retailers.**

OBJECTIVES OF RESEARCH

Objectives

- To validate the TAM-IDT Model and factors that are affecting the technology platform adoption by unorganized retailers using structural equation modelling

- To study the retailer's demographic & business profile and the perception of technology platforms

- To find out the role of demographics & business profile in the retailer's behavioural intention to adopt a technology platform

- To study the impact of COVID-19 pandemic on behavioral intention to adopt technology platform by unorganized retailers

Hypothesis

H1 : Observability plays a significant positive role in perceived usefulness of the technology platform in the retailers

H2 : Trialability has a positive significant impact on the perceived ease of use of the platform by the retailer

H3 : Compatibility of the technology platform with the existing systems plays a positive significant role in behaviour intent of use of the platform

H4 : Compatibility of the technology platform with the existing systems plays a positive significant role in Perceived ease of use

H5 : Relative business advantage plays a significant role in Perceived usefulness of the technology platform

H6 : Perceived positive relative business advantage plays a significant role in behaviour intent of use of the technology platform for a retailer

H7 : Older age of the retailer significantly impact on the behaviour intent of use of the technology platform negatively

H8 : Higher education level positively impacts the behavioural intent of use of the technology platform

H9 : Good Past Experience with technology platforms, has a significantly positive impact on the attitude towards adoption of technology platform

H10 : With the onset of Covid-19 Pandemic the number of retailers adopting to technology platforms has significantly increased because of their business circumstances

METHODOLOGY TO BE ADOPTED

Sample Universe :

As per various industry reports published over the years and specific reference to the 6th Economic Census 2013-14, by Central Statistics Office - Ministry of Statistics and Programme Implementation, published on 2nd April 2018, there are 45.36 million non agricultural establishments in our country out of which 35.41% are engaged in the business of retail trading. This leads us to a ball park number of approx. 16 Mn retail establishments in the country.

As per the UIDAI website of govt of India, the body who is responsible for issuance of Aadhar cards, have projected the population of India by state as of 31st Dec 2020.

S.No	State Name	Total Population (Projected 2020)	% age of Overall Polulation
1	A & N Islands	49782	0.004%
2	Andhra Pradesh	53903393	3.934%
3	Arunachal Pradesh	1570458	0.115%
4	Assam	35607039	2.599%
5	Bihar	124799926	9.109%
6	Chandigarh	1158473	0.085%
7	Chhattisgarh	29436231	2.148%
8	Dadra & Nagar Haveli and Daman & Diu*	615724	0.045%
9	Delhi	18710922	1.366%
10	Goa	1586250	0.116%
11	Gujarat	63872399	4.662%
12	Haryana	28204692	2.059%
13	Himachal Pradesh	7451955	0.544%
14	Jammu Kashmir	13606320	0.993%
15	Jharkhand	38593948	2.817%
16	Karnataka	67562686	4.931%
17	Kerala	35699443	2.606%
18	Ladakh	289023	0.021%
19	Lakshadweep	73183	0.005%
20	Madhya Pradesh	85358965	6.230%
21	Maharashtra	123144223	8.988%
22	Manipur	3091545	0.226%
23	Meghalaya	3366710	0.246%
24	Mizoram	1239244	0.090%
25	Nagaland	2249695	0.164%
26	Odisha	46356334	3.383%
27	Puducherry	1413542	0.103%
28	Punjab	30141373	2.200%
29	Rajasthan	81032689	5.914%
30	Sikkim	690251	0.050%
31	Tamil Nadu	77841267	5.681%
32	Telangana	38510982	2.811%
33	Tripura	4169794	0.304%
34	Uttar Pradesh	237882725	17.362%
35	Uttarakhand	11250858	0.821%
36	West Bengal	99609303	7.270%

Table 2 : Population distribution for all states and UTs in India (Projected on 31st Dec 2020) by https://uidai.gov.in/ in the https://uidai.gov.in/images/state-wise-aadhaar-saturation.pdf

Considering the population of states and UTs, we would like to conduct the study in the State or UT which contributes to more an 1% of the projected population of the county. Basis this criteria, the following Sates and UTs are qualified in the research

S.No	State Name	Total Population (Projected 2020)	Population Mix
1	Uttar Pradesh	23,78,82,725	17.4%
2	Bihar	12,47,99,926	9.1%
3	Maharashtra	12,31,44,223	9.0%
4	West Bengal	9,96,09,303	7.3%
5	Madhya Pradesh	8,53,58,965	6.2%
6	Rajasthan	8,10,32,689	5.9%
7	Tamil Nadu	7,78,41,267	5.7%
8	Karnataka	6,75,62,686	4.9%
9	Gujarat	6,38,72,399	4.7%
10	Andhra Pradesh	5,39,03,393	3.9%
11	Odisha	4,63,56,334	3.4%
12	Jharkhand	3,85,93,948	2.8%
13	Telangana	3,85,10,982	2.8%
14	Kerala	3,56,99,443	2.6%
15	Assam	3,56,07,039	2.6%
16	Punjab	3,01,41,373	2.2%
17	Chhattisgarh	2,94,36,231	2.1%
18	Haryana	2,82,04,692	2.1%
19	Delhi	1,87,10,922	1.4%

Table 3 : States and UTs with more than 1% population contribution to the population of India as reported by UIDAI

For the uniformity of data, we would like to conduct the research in the state capital or the union territory in the shortlisted States and UTs shown in Table 3. In this case, there are 4 states that have shared capitals, which we will be considering as one city each for both the states, i.e., Chandigarh for Haryana & Punjab and Hyderabad for AP and Telangana

Sampling Design & Method

We will use Quota Sampling Method for the research

Type of Data Collection

Primary Data from unorganized retailers through questionnaires.

Secondary Data for trends and computer research

Sampling Process

Target Population	Unorganized Retailers	50 retailers per City for primary research. Total Sampling Population will be 850 retailers across 17 cities

Sampling Unit

S.No	State Name	Total Population (Projected 2020)	Population Mix	Capital Cities	Sample Size	
1	Uttar Pradesh	23,78,82,725	17.4%	Lucknow	50	
2	Bihar	12,47,99,926	9.1%	Patna	50	
3	Maharashtra	12,31,44,223	9.0%	Mumbai	50	
4	West Bengal	9,96,09,303	7.3%	Kolkatta	50	
5	Madhya Pradesh	8,53,58,965	6.2%	Bhopal	50	
6	Rajasthan	8,10,32,689	5.9%	Jaipur	50	
7	Tamil Nadu	7,78,41,267	5.7%	Chennai	50	
8	Karnataka	6,75,62,686	4.9%	Bengaluru	50	
9	Gujarat	6,38,72,399	4.7%	Gandhinagar	50	
10	Andhra Pradesh	5,39,03,393	3.9%	Hyderabad	50	
11	Odisha	4,63,56,334	3.4%	Bhubneshwar	50	
12	Jharkhand	3,85,93,948	2.8%	Rachi	50	
13	Telangana	3,85,10,982	2.8%	Hyderabad		Joint Capital with AP
14	Kerala	3,56,99,443	2.6%	Tiruvanthapuram	50	
15	Assam	3,56,07,039	2.6%	Guwahati	50	
16	Punjab	3,01,41,373	2.2%	Chandigarh	50	
17	Chhattisgarh	2,94,36,231	2.1%	Raipur	50	
18	Haryana	2,82,04,692	2.1%	Chandigarh		Joint Capital with Pb
19	Delhi	1,87,10,922	1.4%	Delhi	50	
	Total				**850**	

Table 4 : Sample population by city

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Supervisor: DR. RASHI BANERJI Department: MANAGEMENT

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A Study of Technology Platform Adoption by Unorganized Grocery Retailers in India

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Registrationnumber: 2K20-PFM-003

Underthesupervisionof

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Year 2020

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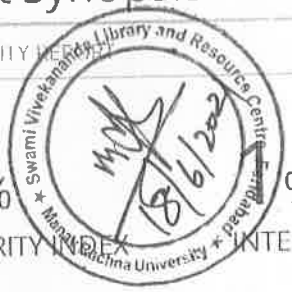

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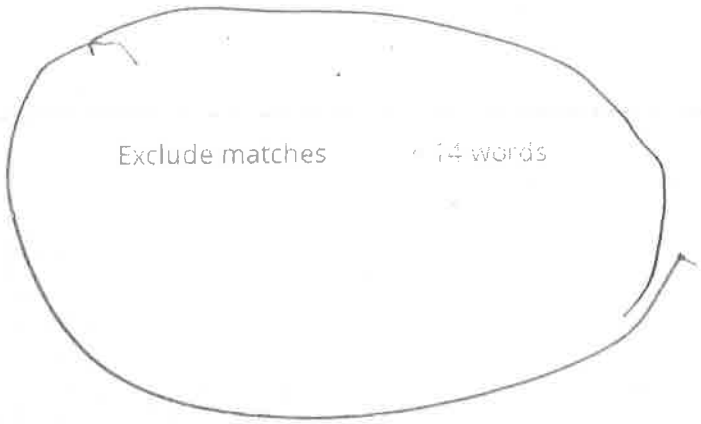

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2. Department : DMC
3. Date of Registration : 2019-20
4. Enrollment No : 2K20-PFM-003
5. Name of the Supervisor : Dr. Rashi Banerji
6. Name of the Co-Supervisor : NA
7. Research Area : Retail Management
   Title – "A Study of Technology Platform Adoption by Unorganized Retailers in India"
8. Comments:
   - Hypothesis to be rephrased & should suggest the direction of Research
   - Study framework is ok
   - Synopsis are ok and can be submitted after these minor modifications

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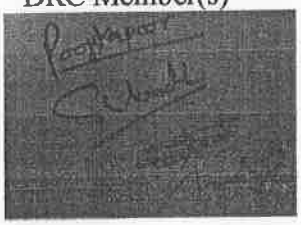

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